

ABSTRACT

5 A dielectric barrier discharge lamp lighting device includes a transformer $\{T\}$ that supplies a driving voltage to a dielectric barrier discharge lamp $\{1\}$ from a secondary coil $\{L2\}$, and a driving circuit $\{4\}$ that controls an input voltage to the transformer $\{T\}$ to supply a driving voltage with a driving frequency fd to the dielectric barrier discharge lamp— $\{1\}$. The self-resonant frequency fr of the 10 secondary coil, which is measured with the primary coil of the transformer being open, is equal to the driving frequency fd or a frequency in the vicinity of the driving frequency fd . This frequency fr satisfies, for example, $0.9fd \leq fr \leq 1.3fd$.

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